

### REMARKS

Claims 1-72 are pending. (OA cover sheet.) Claims 1-36 have been withdrawn from consideration pursuant to Applicant's election in the communication dated May 9, 2001. (Paper No. 13.) The Examiner has newly withdrawn claims 55-72 from consideration. (OA at p. 2.)

Applicant thanks Examiners Sheinberg and Allen for the telephonic interview held May 1, 2002, during which the basis for the rejection of claims 37-54 and withdrawal of claims 55-72 was discussed.

### Support for the Claim Amendments

Support for amended claims 37 and 55 can be found throughout the Specification, including page 2, line 28; page 5, line 27; page 6, lines 8-17; page 7 lines 7-8; page 8, line 1; page 14, lines 15-16; page 14, lines 23-24; and page 15, lines 12-13. No new matter was added by the amendments.

### Rejection under 35 U.S.C. § 101

The Examiner has rejected claims 37-54 under 35 U.S.C. § 101 as being directed to non-statutory subject matter. The Examiner has alleged that "[t]he storage of a data structure, a 'simulated metal ion' ... as instantly claimed, is merely the storage of a mere arrangement of data; thus non-statutory." (OA at p. 2.)

Applicant traverses this rejection. As amended, claims 37-54 are statutory. Machines are one of the categories of subject matter under § 101. 35 U.S.C. § 101. A machine that is capable of simulating metal ions is practically useful, e.g., for identifying inhibitors of angiogenesis to combat cancers, and for identifying inhibitors of anthrax and botulism toxins. (See instant application at p. 12, l. 1 – p. 14, l. 12.) Claim 37 recites "a machine having a memory that contains data..." Claims so drafted are statutory. See, In re Warmerdam, 33 F.3d 1354, 1360 (Fed. Cir. 1994) (stating that claims reciting a machine having a memory that contains data are patentable subject matter).

Claims 38-54 depend directly or indirectly from claim 37 and therefore contain all of the limitations of claim 37. Thus, claim 37 and claims 38-54 are directed to statutory subject matter. The Examiner's rejection under 35 U.S.C. § 101 is improper and should be withdrawn.

Restriction under 37 CFR § 1.142(b)

The Examiner withdrew claims 55-72 pursuant to 37 C.F.R. § 1.142(b) as being drawn to non-elected Group 1, stating without any accompanying reasons or evidence that:

Group 1 is drawn to a method of molecular dynamic simulation that uses a simulated metal ion. Claims 55-72, as a computer readable medium that stores instructions for molecular dynamic simulation are considered to correspond to the invention of Group 1.

(OA at p. 2.)

The Examiner also indicated in the Advisory Action that a complete reply to the final rejection must cancel the non-elected claims or include other appropriate action.

Applicant traverses the Examiner's restriction requirement and is submitting a petition under 37 CFR § 1.144 concurrently. Claims 55-72 remain in the application pending a decision on this petition.

Applicant submits that the Examiner's withdrawal of claims 55-72 as method claims under 37 C.F.R. § 1.142(b) is improper. Applicant submits that if the Examiner wishes to withdraw claims 55-72 from consideration at this time, the Examiner must do so under 37 C.F.R. § 1.145. To date, the Examiner has not done so. Further, even under § 1.145, the Examiner has failed to satisfy her burden. Applicant addresses these failings in turn.

It is incumbent upon the Examiner to support a rejection or withdrawal of claims with sound reasoning and evidence so the Applicant can evaluate the propriety of the rejection or withdrawal. See 35 U.S.C. § 132; In re Dembiczak, 175 F.3d 994, 999 (Fed. Cir. 1999) (citing Application of Sichert, 566 F.2d 1154, 1164 (Cust. & Pat. App. 1977)). The Examiner has failed to meet this burden with the unsupported assertion that claims 55-72 fall within the method claims of previously identified Group I (i.e., claims 1-18, 25-31, 33, and 35-36). (Paper No. 5 at p. 2.)

Claims 55-72 are not method claims. Claims 55-72 claim an article of manufacture and recite "a computer readable medium." According to the Examiner, the Group 1 claims 55-72 are "drawn to a method." (See OA at page 2.) A claim that contains method steps does not transform the claim from an article claim to a method claim. See In re Warmerdam, 33 F.3d

1354, 1361 (Fed. Cir. 1994). Method claims by their very nature involve an active step, i.e., a process. A computer readable medium is an article of manufacture not a method. Thus, claims 55-72 cannot reasonably be characterized as belonging to non-elected Group 1.<sup>1</sup>

Claims 55-72 are not independent and distinct from claims 37-54, and therefore it is improper for the Examiner to withdraw them from further consideration. A restriction requirement may be applied to a subset of claims only if the restricted claims are independent and distinct from the remaining claims. See, e.g., 37 CFR § 1.145. The Manual of Patent Examining Procedure ("M.P.E.P.") defines "independent" and "distinct" as follows:

#### INDEPENDENT

The term "independent" (i.e., not dependent) means that there is no disclosed relationship between the two or more subjects disclosed, that is, they are unconnected in design, operation or effect, for example, (1) species under a genus which species are not usable together as disclosed or (2) process and apparatus incapable of being used in practicing the process.

#### DISTINCT

The term "distinct" means that two or more subjects as disclosed are related, for example as combination and part (subcombination) thereof, process and apparatus for its practice, process and product made, etc., but are capable of separate manufacture, use or sale as claimed, AND ARE PATENTABLE (novel and unobvious) OVER EACH OTHER (though they may each be unpatentable because of the prior art). It will be noted that in this definition the term "related" is used as an alternative for "dependent" in referring to subjects other than independent subjects.

See M.P.E.P. § 802.01 (emphasis in original).

The Examiner failed to provide any evidence showing that claims 55-72 are both independent and distinct from claims 37-54. Additionally, claims 55-72 are not independent and distinct from claims 37-54. Rather, the inventions recited in each set of claims are connected in operation and effect. Both sets of claims relate to computer readable media for used for metal

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<sup>1</sup> Moreover, if there is any doubt, claims 55-72 also pass muster under § 101. See In re Beauregard, 53 F.3d 1583, 1584 (Fed. Cir. 1995) (referring to the PTO Commissioner's position that "computer readable programs embodied in a tangible medium, such as floppy diskettes, are patentable subject matter under § 101, and must be examined under 5 U.S.C. §§ 102 and 103").

ion simulation. Claims 55-72 relate to a computer readable medium having executable instructions that simulate a metal ion. Claims 37-54 relate to a machine having data structures that store a simulated metal ion. Thus, claims 55-72 and claims 37-54 are not independent and distinct from each other, and should be examined together.

Even if claims 55-72 were independent and distinct from claims 37-54, searching the claim sets together could be made without serious burden. "If the search and examination of an entire application can be made without serious burden, the examiner must examine it on the merits, even though it includes claims to distinct or independent inventions." See, e.g., M.P.E.P. §803. Both sets of claims refer to the same type of simulated ion and both sets of claims concern computer generated simulated ions. As such, searching either set of claims will satisfy the search requirements for the other set. A search for references relevant to each set of claims would be coextensive, and no serious burden would be incurred by examining claims 55-72 together with related claims 37-54. Under such conditions, the Examiner should search both sets of claims regardless of the independence and/or distinctiveness of the claims.

#### CONCLUSION

In view of the foregoing amendments and remarks, Applicant respectfully requests reconsideration and prompt allowance of claims 37-72. Applicant has enclosed a marked-up version of the amended claims. Please apply any other charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Date: \_\_\_\_\_

8/19/02



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Serial No. : 09/595,650  
Filed : June 16, 2000  
Page : 7



Attorney's Docket No.: 07039-161001

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AUG 28 2002

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**Version with markings to show changes made**

In the claims:

Claims 37 and 55 have been amended as follows:

37. (Twice amended) A [computer readable medium] machine having a memory that contains data [structures stored thereon comprising a data structure to store] representing a simulated metal ion generated by [for use in] a molecular dynamics simulation, wherein said simulated metal ion comprises [comprising] a center atom having a van der Waals radius greater than zero covalently linked to one or more dummy atoms having a van der Waals radius of about zero, wherein the overall charge of said metal ion is evenly distributed among said dummy atoms and wherein said center atom has a charge of zero.

55. (Amended) A computer readable medium having computer executable instructions stored thereon, [that when executed] wherein the execution of said instructions simulates a metal ion [for use in a molecular dynamics simulation], said metal ion comprising a center atom having a van der Waals radius greater than zero covalently linked to one or more dummy atoms having a van der Waals radius of about zero, wherein the overall charge of said metal ion is evenly distributed among said dummy atoms and wherein said center atom has a charge of zero.